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10/064,898	08/27/2002	Harold P. Amann	718149.2	7976
27128	7590	11/03/2003	EXAMINER	
BLACKWELL SANDERS PEPER MARTIN LLP			GREENE, JASON M	
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SUITE 2400			PAPER NUMBER	
ST. LOUIS, MO 63101			1724	

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Please find below and/or attached an Office communication concerning this application or proceeding.



## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-37 are objected to under 37 CFR 1.75(f) because the claims are not numbered consecutively in Arabic numerals. Appropriate correction is required. Specifically, instead of being numbered as required by 37 CFR 1.75(f), the claims have been numbered using paragraph numbers preceded by the prefix "c" and enclosed within brackets (e.g., [c1], [c2], etc.). The Examiner suggests Applicants amend the claims by inserting the appropriate Arabic number followed by a period at the beginning of each claim.

### ***Claims***

2. With regard to claim 12, the Examiner suggests Applicants delete line 2, which is a repetition of line 1, to correct an apparent typographical error.
3. With regard to claims 4, 14, 23, and 32, the Examiner has interpreted the word "near" as meaning that the opening is located at the apex or offset only slightly due to manufacturing tolerances.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Byrns.

With regard to claim 1, Byrns discloses a filter housing assembly for housing a filter member therewithin comprising a housing member (18) having a substantially closed end portion and an open end portion, said housing member having a substantially hollow interior accessible from said open end portion and adaptable for receiving a filter member (12) therewithin, said closed end portion having at least one opening (43) extending therethrough for allowing air to enter said housing member, a first end cap member (16) adaptable for engaging one end portion of a filter member, said first end cap member being receivable within the interior of said housing member, and a second end cap member (14) adaptable for engaging the opposite end portion of a filter member, said second end cap member being engageable with said housing member and having an opening (20) associated therewith for allowing air to exit said housing member, said first and second end cap members and said housing member forming a peripheral space around a filter member when said first end cap member and

a filter member are positioned within said housing member and said second end cap member is engaged with said housing member in Figs. 1-5 and col. 2, line 62 to col. 5, line 61.

With regard to claim 2, Byrns discloses the housing member being substantially cylindrical in shape in Figs. 1 and 5.

With regard claim 6, Byrns discloses the size of said at least one opening extending through the closed end portion of said housing member being substantially equal to the size of the opening associated with said second end cap member in col. 3, lines 51-58.

6. Claims 1, 3, 4, 6, 9, 10, 12-14, 16, 19, 20, 22-25, 29, 30, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Buttery.

With regard to claims 1, 3, 9, 10, 12, 13, 19, 20, 22, 29, and 30, Buttery discloses a filter housing assembly (11) for housing a filter member therewithin comprising a substantially frusto-conical shaped housing member (15) having an open end portion associated with one end portion thereof and a substantially closed dome shaped portion associated with the opposite end portion thereof, said housing member having a substantially hollow interior accessible from said open end portion and adaptable for receiving a filter member (12) therewithin, said substantially closed dome shaped

portion having at least one opening (21) extending therethrough for allowing air to enter said housing member, and a plurality of circumferentially spaced shoulder members (32) associated with the interior of said housing member, said shoulder members being positioned and located to facilitate centering of said filter member within said housing member when said filter member is positioned therewithin, a first end cap member (45) adaptable for engaging one end portion of a filter member and being receivable within the interior of said housing member, said first end cap member being engageable with said plurality of shoulder members when inserted within said housing member, and a second end cap member (16) adaptable for engaging the opposite end portion of a filter member, said second end cap member being engageable with the opened end portion of said housing member and having an opening (22) associated therewith for allowing air to exit said housing member, said first and second end cap members and said housing member forming a peripheral space around a filter member when said first end cap member and a filter member are positioned within said housing member and said first end cap member engages said plurality of shoulder members and when said second end cap member is engaged with said housing member, engagement of said first end cap member with said plurality of shoulder members enabling air entering the at least one opening in the substantially closed dome shaped portion of said housing member to travel through said peripheral space in Figs. 1 and 2 and col. 3, line 25 to col. 4, line 57.

The housing member is seen as being frusto-conical since, as shown in Figs. 1 and 2, the lower open end portion of the housing member (15) has a larger diameter

than the upper substantially closed dome shaped portion. The upper substantially closed portion of the housing member is seen as being dome-shaped since, as shown in the Figures, the upper portion of the housing member is rounded. Additionally, while Figs. 1 and 2 depict the upper dome shaped portion of the housing member having a cylindrical protrusion (13), Buttery explicitly discloses that such is only a preferred embodiment and that the inlet can be formed as any suitable connector including threaded connections in col. 3, lines 42-54. Therefore, an embodiment wherein the inlet is formed as a female threaded aperture is seen as being within the disclosure of Buttery.

With regard to claims 4, 14, 23, and 32, Buttery discloses the opening in the dome shaped portion of said housing member being located near the apex thereof in Figs. 1 and 2.

With regard to claims 6, 16, and 25, Buttery discloses the opening extending through the closed end portion of the housing member is substantially equal to the size of the opening associated with said second end cap member in Figs. 1 and 2.

With regard to claim 24, Buttery discloses the filter member including a passageway (the hollow interior of the annular filter member) extending therethrough, the opening associated with said second end cap member being positioned and located so as to lie in communication with the passageway extending through the filter member

when the second end cap member is engaged with the opposite end portion of the filter member in Figs. 1 and 2.

7. Claims 33, 36, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Buttery.

With regard to claim 33, Buttery discloses a method for assembling a filtration unit which is usable on a compressor assembly comprising selecting a filter member (12), sealingly attaching one end portion of said filter element to a first end cap member (45), sealingly attaching the opposite end portion of said filter member to a second end cap member (16), said second end cap member having an opening (22) associated therewith, inserting said filter member attached to said first and second end cap members within a filter housing member, said filter housing member being substantially frusto-conical in shape and having a substantially hollow interior adaptable for receiving the filter member, said housing member having an open end portion for allowing access to the interior thereof and having a substantially closed dome shaped portion, at least one opening (21) extending through said dome shaped portion for allowing air to enter said housing member, said housing member further including a plurality of circumferentially spaced projections (32) associated with the interior thereof, positioning said filter member attached to said first and second end cap members within said housing member such that said first end cap member engages said plurality of spaced shoulder members and said second end



cap member engages said housing member, and sealingly attaching said second end cap member to said housing member in Figs. 1 and 2 and col. 3, line 25 to col. 6, line 51.

With regard to claim 36, Buttery discloses the second end cap member being attached to said housing member through the use of an ultrasonic weld so as to create an air tight bond therebetween in col. 5, line 55 to col. 6, line 3.

With regard to claim 37, Buttery discloses the second end cap member including a tubular portion (14), the opening associated with the second end cap member extending through the tubular portion, said tubular portion being engageable with a compressor assembly in Figs. 1 and 2.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5, 7, 8, 11, 15, 17, 18, 21, 26-28, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buttery.

With regard to claims 5 and 15, Buttery does not disclose the at least one opening being offset from the apex of the domed portion of said filter housing.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to shift the location of the opening in that shifting the location of parts when operation of the device is not otherwise affected is merely a choice of design. See *In re Japikse*, 86 USPQ 70.

With regard to claims 7, 8, 17, 18, and 26-28, Buttery does not disclose the size of the opening extending through the closed dome shaped portion of the housing member being less than or greater than the size of the opening associated with said second end cap member or the sizes of the opening extending through the dome shaped portion of the housing member and the opening associated with the second end cap being within about 3/16 inch to 1/ inch.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the size of the openings extending through the closed dome shaped portion and/or the opening associated with the second end cap regulate the flow rate or pressure drop through the filter housing assembly, as is well known in the art.

With regard to the opening being sized for noise attenuation, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences

would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

With regard to claims 11, 21, and 31, Buttery does not disclose the substantially closed domed shaped end portion of the housing member having a plurality of openings extending therethrough for allowing air to enter said housing member.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to duplicate the opening of Buttery to allow the filter housing to simultaneously receive air from a plurality of sources.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to duplicate the opening of Buttery in that duplicating parts for a multiplied effect is merely a choice of design. See *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11.

10. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buttery in view of Byrns.

Buttery does not disclose the end portion of the filter member being attached to the first end cap member by applying a hot melt adhesive to at least a portion of said first end cap member, and wherein the one end portion of said filter member is thereafter engaged with the holt melt adhesive so as to create an air tight bond therebetween or the opposite end portion of the filter member being attached to the second end cap member by applying a hot melt adhesive to at least a portion of said

second end cap member, and wherein the opposite end portion of said filter member is thereafter engaged with the hot melt adhesive so as to create an air tight bond therebetween.

Byrns discloses a similar method wherein a hot melt adhesive is used to attach the first and second ends of a filter (12) to first and second end caps (16,14) in Figs. 2 and 5 and col. 4, line 14 to col. 5, line 24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adhesive of Byrns into the method of Buttery to effect a leak proof seal between the filter member and the end caps to ensure that all air flowing into the filtration unit is forced to pass through the filter member, as suggested by Byrns in col. 5, lines 14-24.

While Buttery mentions that the filtration unit is constructed such that the filter member can be sealingly attached to the end caps without the use of adhesive, the Examiner notes that one of ordinary skill in the art would nonetheless recognize that adhesive could be employed to ensure an air tight assembly.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Kippel et al., Berger, Jr. et al., and Virgille et al. references disclose similar filter housing assemblies.

Application/Control Number: 10/064,898  
Art Unit: 1724

Page 12

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (703) 308-6240. The examiner can normally be reached on Tuesday - Friday (7:00 AM to 5:30 PM).

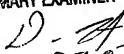
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (703) 308-1261. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jason M. Greene  
Examiner  
Art Unit 1724



DUANE SMITH  
PRIMARY EXAMINER

  
10-28-03

jmg  
October 24, 2003